

REMARKS/ARGUMENTS

The Examiner is thanked for the Office Action mailed April 24, 2007. The status of the application is as follows:

- Claims 1-24 are pending. Claims 1, 5, 20 and 21 have been amended herein. Claims 25, 26, and 27 have been added.
- Claims 4, 5, 18, and 19 are objected to for depending on a rejected base claim.
- Claims 6 and 7 are rejected under 35 U.S.C. 112, second paragraph.
- Claims 1-3, 6-9, 17, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al. (US 5,777,335) in view of Croydon (UK patent application 2364379A).
- Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al. and Croydon and further in view of Hoffman (US 6,115,448).
- Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon (US 6,256,404 B1) in view of Mochizuki et al. and Croydon.

The objections and rejections are discussed below.

The Objection to Claims 4, 5, 18, and 19

The Examiner is thanked for indicating that claims 4, 5, 18, and 19 would be allowable if rewritten to include all the limitations of the base claim and any intervening claims. Claims 4, 18, and 19 have been rewritten in independent form as such respectively as new claims 25, 26, and 27. No new matter has been added. Accordingly, claims 25, 26, and 27 should be allowed. As discussed in greater detail below, independent claim 1 has been amended to include aspects of claim 5. As a result, claim 5 has been amended herein.

The Rejection of Claims 6 and 7 under 35 U.S.C. 112, Second Paragraph

Claims 6 and 7 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office asserts that the term “substantially” in claim 6 does not clearly set forth the metes and bounds of the patent protection desired. Claim 7 is rejected for depending from claim 6. Applicant traverses this rejection.

Claim language including a term of degree such as “substantially” does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph. (See MPEP §2173.05(b) *citing Seattle Box Co., v. Industrial Crating & Packing, Inc.*, 731 F.2d 818 (Fed. Cir. 1984)). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed in light of the specification. (See MPEP §2173.05(b); *In re Mattison*, 509 F.2d 563 (CCPA 1975) (holding the claim language “substantially” definite in view of the specification); *Andrew Corp. v. Gabriel Electronics*, 847 F.2d 819 (Fed. Cir. 1988) (holding the claim language “substantially” definite because one of ordinary skill in the art would know what was meant by the term “substantially.”). When such a term of degree is presented in a claim, a determination is made as to whether the specification provides some standard for measuring that degree; if it does not, a determination is made as to whether one of ordinary skill in the art, in view of the art, would be reasonably apprised of the scope of the invention. (See MPEP §2173.05(b)).

Claim 6, which depends from claim 1, recites, *inter alia*, that the electrical feedthroughs are substantially absorbing with respect to the penetrating radiation and cooperate with the radiation shield to shield the electronics from the penetrating radiation that has passed through the scintillator. Hence, the electrical feedthroughs substantially absorb radiation that traverses the scintillator to shield the electronics from such radiation. Thus, claim 6 provides some standard for measuring the relative degree of the term “substantially”; claim 6 requires radiation absorption that shields the electronics

from radiation traversing the scintillator. Radiation incident on the electronics may negatively affect the electronics. One of ordinary skill in the relevant art would be reasonably apprised of the scope of claim 6.

In addition, page 8, lines 14-25, and claims 12 and 13 of the instant application list examples of suitable materials such as high-Z materials (e.g., Tungsten, lead, etc.) for the feedthroughs. Page 8, lines 26-30, of the instant application states that the thickness of the feedthroughs is selected based upon the x-ray absorption properties of the feedthrough material, along with any thickness constraints imposed by the physical structure of the radiation detector, and cost considerations. Page 7, lines 23-30, of the instant application states that the high Z-material is dense and highly absorbing of imaging radiation and that imaging radiation passing through gaps between scintillator crystals is absorbed by the high-Z feedthroughs. Thus, the detailed description and other claims also provide some standard for measuring the relative degree of the term "substantially."

In view of the above, the rejection of claims 6 and 7 should be withdrawn.

The Rejection of Claims 1-3, 6-9, 17, and 21-24 under 35 U.S.C. 103(a)

Claims 1-3, 6-9, 17, and 21-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al. in view of Croydon. This rejection should be withdrawn and claims 1-3, 6-9, 17, and 21-24 should be allowed because the subject claims have been amended with aspects deemed allowable by the Office.

Claim 1 has been amended with the limitations of claim 5. As noted above, the Office has indicated that claim 5, which depends from claim 1, would be allowable if rewritten to include all the limitations of the base claim and any intervening claims. Accordingly, allowance of claim 1 and claims 2-3, 6-9, and 17, which depend therefrom, is requested.

Independent claim 21 has been amended and now further recites that the electrical signals, which are communicated via the feedthroughs in the radiation shield,

are communicated over electrical conductors electrically isolated from the radiation shield. On page 8 of the Office Action, the Office has indicated that the prior art fails to teach or make obvious a radiation detector including an electrical conductor and an insulator electrically isolating the electrical conductor from the radiation shield. As such, it is believed that amended claim 21 is in condition for allowance. Therefore, withdrawal of the rejection to claim 21 and claims 22-24, which depend therefrom, and allowance of claims 21-24 is respectfully requested.

The Rejection of Claims 12-16 under 35 U.S.C. 103(a)

Claims 12-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al. and Croydon and further in view of Hoffman. **Claims 12-16** depend from claim 1 and are allowable at least by virtue of their dependencies.

The Rejection of Claim 20 under 35 U.S.C. 103(a)

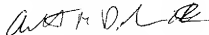
Claim 20 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon in view of Mochizuki et al. and Croydon. This rejection should be withdrawn because claim 20 has been amended with aspects deemed allowable by the Office. In particular, amended **claim 20** recites, *inter alia*, that a radiation shield is disposed between the tiled array of detector modules and electronics, and an isolated electrical conductor provides an electrical path between the tiled array and the electronics through an opening in the radiation shield. On page 8 of the Office Action, the Office has indicated that the prior art fails to teach or make obvious a radiation module including an electrical conductor and an insulator electrically isolating the electrical conductor from a radiation shield disposed between a detector array and electronics, wherein the electrical conductor electrically connects the detector array and the electronics. As such, it is believed that this amendment places claim 20 in condition for allowance. Accordingly, withdrawal of this rejection and allowance of claim 20 is respectfully requested.

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Conclusion

In view of the foregoing, it is submitted that the claims distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

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